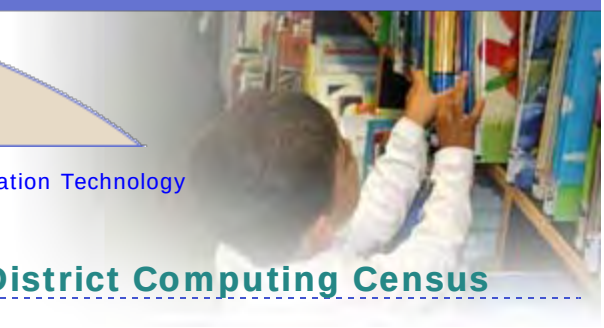


The 2000 Missouri School District Computing Census

Back to Census of Technology

District Level Reports

Table of Contents

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

About Education Technology
Census of Technology (Core Data)
Correspondence Archives
District Planning Resources
eMINTS/METS Classroom Grants
METS School Grants Program
State Technology Plan
Title II.D Competitive Grants
Title II.D Formula
Workshops and Conferences

DESE Web Applications

Get ADOBE READER
About Video

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008

The 2000 Missouri School District Computing Census

Introduction

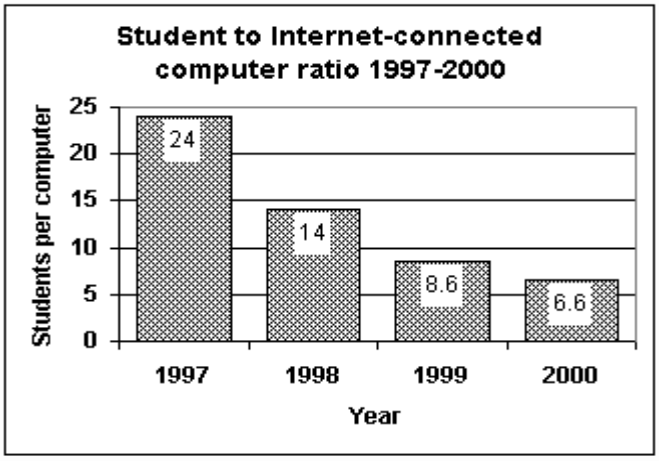
Back to 2000 Census

The infusion of networked instructional technology in Missouri classrooms is continuing. Almost all our schools and more than 80 percent of our classrooms are "wired." As illustrated below the number of students per Internet connected computer continued to decline between 1999 and 2000.

Yet, overall in the state, additional networked computers are required to achieve instructionally significant levels of connectivity in our classrooms. Also, additional professional development among our Missouri teachers is necessary. Like knowledge workers everywhere, teachers need to learn how networked computers and other instructional technologies work. They also need to learn the new teaching strategies that, together with the technology, can create powerful learning environments for our children.

This Missouri "Census of Technology" is designed to assess our continuing investment in K-12 instructional technology and to help guide the efforts ahead. The 2000 Census of Technology shows that Missouri has come a long way in providing schools with new technology. More classrooms are wired, more schools are connected and student-to-computer ratios have declined.

There has also been dramatic change in who is involved in making decisions about the acquisition of instructional technology. In 1998 only 28% of superintendents and 11% of principals were involved. In 2000, 93% of superintendents and 90% of principals were involved. Moreover, administrative officers such as MIS directors and finance directors are much less involved and teachers, parents, technology teams and instructional technology directors are much more involved. This shift may represent an encouraging focus on the instructional, rather than merely the technological, dimensions of instructional technology.



Of the 53,223 classrooms reported in Missouri public schools, 82% or 43,787 of them are wired for the Internet – up from 74% in 1999 and 56% in 1998.

- Over 97% of Missouri schools report connections to the Internet - up from 95% in 1999.
- Student to Internet-connected computer ratio is currently 6.6 to 1 - down from 8.6 to 1 in 1999, 14 to 1 in 1998, and 24 to 1 in 1997. This is a 72% reduction between 1997 and 2000.

Although the amount of technology available to Missouri's students has grown dramatically, there remains much to do. The evidence is that the impact of technology on student performance is most effective when there is:

- A student to computer ratio of 5 to 1 or less within the classroom
- A change in the way teaching is conducted using technology
- A teacher workstation for every classroom
- Professional development for teachers
- High-speed Internet connectivity

Demonstration projects in Missouri document impressive increases in student performance when (1) teachers and students have access to enough educational technology in the classroom, (2) when that technology is coupled with an integrated curriculum, and the (3) when teachers have effective professional development. These demonstration projects have helped to provide a vision for what is needed in a 21st century classroom (see www.more.net).

REPORTING FORMATS:

The section below provides a statewide summary of results by district and by building for key indicators regarding technology planning, training, hardware and Internet connectivity. It is followed by a review of the census methodology.

Detailed responses for the district and building census forms are provided in Appendix A and B.

Appendix C is a detailed review data processing procedures used for the on-line data collection forms.

On-line summaries for each district (including links to reports for each individual building with the district) are available on the DESE web site at http://www.dese.mo.gov/computingcensus/2000/summary.html.
These summaries provide two years of data for each district and a comparative review of the statewide indicators.

Revised 19Sep00

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008

The 2000 Missouri School District Computing Census

Executive Summary Of The 2000 Missouri Census Of Technology

Back to 2000 Census

PLANNING:

PLANNING - DISTRICTS

- Ninety-nine percent of the districts have a technology plan. This is up from 96% in 1999 and 93% in 1998. Forty-four percent of this year's plans cover a five-year period, compared with 53% in 1999 and 50% in 1998.
- Eighty-six percent of school buildings have a building technology plan in 2000, compared with 83% in 1999 and 73% in 1998. Ninety-seven percent report that their building plan is part of the district plan.
- Ninety-six percent of districts include technology as part of their Comprehensive School Improvement Plan, up from 95% in 1999 and 92% in 1998.
- Eighty-nine percent of district technology plans were approved by DESE for 2000, up from 82% in 1999 and 71% in 1998. Approval is required for participation in the e-rate program. (The nationwide Universal Service Fund (E-rate) is being supported through an assessment to all providers of telecommunication services. The funding is available for telecommunication services provided after January 1, 1998, through June 30, 2000 to all schools and libraries that apply, on a first-come, first-served basis.)
- Ninety percent of the 2000 district plans covered the following items; hardware/peripherals, school computer software, internal connections, staff training, curriculum integration, and maintenance of equipment. Fifty-seven percent of the 2000 plans covered the school's electrical wiring capacity, while in previous years less than 50% covered wiring.
- Who is making the decisions about technology acquisition and use within a district? The following are presented in 2000 rank order, with 1998 and 1999 percentages:

Group involved	1998	1999	2000
Teachers	85%	90%	93%
Superintendent	28%	90%	93%
Principals	11%	89%	90%
Technology team	50%	84%	87%

Library Media Specialist	83%	82%	85%
School Board Members	76%	73%	78%
Parents	19%	67%	74%
Instructional technology director	20%	57%	62%
Curriculum director	69%	31%	36%
Consultants	86%	26%	30%
Business partners	14%	19%	23%
Chief Financial Officer	83%	20%	22%
Other	12%	17%	22%
Director of Management Information	63%	12%	15%

- Twenty-nine percent of the districts partnered with a business or higher education institution to support technology in 2000, up from 27% in 1999 and 22% in 1998.

PLANNING - SCHOOL BUILDINGS

- Eighty-six percent of schools have a technology plan, up from 83% in 1999 and 71% in 1998. Of these schools, 97% of the building plans are part of the district plan.
- Over 84% of building technology plans cover computer software, internal connections, computer maintenance, and curriculum integration, an increase from 75% in 1999.
- Ninety-seven percent of schools have a school improvement plan, and 99% of these schools' plans include technology as a component.
- Thirty-one percent of schools partner with a business or higher education institution to support technology. This is an increase from 29% in 1999 and 23% in 1998.

TRAINING:

TRAINING - DISTRICTS

- Instructional integration was ranked the highest priority for technical assistance with educational technology.

Areas for which districts gave a high priority	Pct. Of	Pct. Of Schools

ranking for technical assistance (1999)	Schools 1999	2000
Instructional integration	73%	78%
Curriculum integration	72%	77%
Technology planning	44%	44%
Network/wiring	45%	43%
Information systems	33%	35%
Basic operations	33%	31%
Procurement	24%	24%
Budget planning	20%	20%
Community awareness	19%	20%

- In 2000, 8% of the districts required teachers to demonstrate technology skills for employment or continued employment within the district. In 1999 and 1998, 7% of districts had this requirement.
- Those districts requiring demonstration of technology skills by their teachers, evaluate the teachers by: monitoring professional development hours (2000-5% / 1999-4%), hands-on-evaluations (2000-4% / 1999-4%), and transcripts (2000-3% / 1999-2%).
- Sixty-three percent of school administrators are at an intermediate skill level in the use of technology. This is up from 59% in 1999 and 50% in 1998.
- Eighteen percent of Missouri school districts have technology requirements for students to advance.
- District personnel estimate that 78% of sixth graders are computer literate - up from 70% in 1999

TRAINING - SCHOOL BUILDINGS

- Fifty-three percent of buildings plan to increase the number of scheduled professional days scheduled for technology training (54% in 1999), 45% indicated that scheduled days would remain the same (42% in 1999), and 2% said they would reduce scheduled days for technology training (4% in 1999).

HARDWARE:

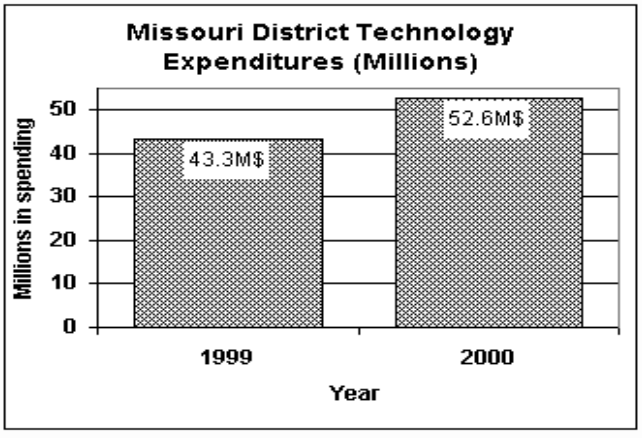
HARDWARE - DISTRICTS

- District-level staff and outside vendors were most commonly responsible for

technical maintenance/support in the district 1998 through 2000.

Responsible persons	1998	1999	2000
District staff	70%	73%	77%
Outside vendors	65%	69%	72%
School certified staff	44%	51%	56%
Contractors' agreement	22%	22%	24%
School classified staff	15%	17%	20%
Students	10%	13%	17%
Parents/community members	3%	5%	4%
Regional centers/units	2%	3%	3%
No one	0%	0%	0%

- IBM compatible computers are the most common computers in use in business/administrative offices (88%). Apple and Macintosh computers comprise only 12% of district office computers.



- Missouri school districts have spent or budgeted $52,608,300 for computer hardware and peripherals in the 1998-99 school year - up from $43,321,919 in

1999. During the same period, $7,864,958 was spent or budgeted for instructional software, and $4,289,194 for professional development.

HARDWARE - SCHOOL BUILDINGS

- There are 187,623 computers in Missouri school classrooms, up from 176,150 in 1999 and 131,777 in 1998. This is an increase of 42% between 1998 and 2000.
- The ratios of students to computers in Missouri has become much smaller between 1998 and 2000.

Ratio	1998	1999	2000	% Change 1998-2000
Students per computer	6.4	4.8	4.2	-34%
Students per Internet capable computer	8.3	6.1	5.1	-39%
Students per Internet connected computer	13.5	8.6	6.6	-51%

INTERNET CONNECTIVITY:

INTERNET CONNECTIVITY - DISTRICTS

- Ninety-two percent of district offices have a direct connection to the Internet, up from 85% in 1999. Of these, 88% have a T1 connection, again up from the 77% of 1999.
- Seventy-six percent of districts require parent signatures for students to access the Internet (average of percentage for elem., middle, and high schools), up from 68% in 1998.

INTERNET CONNECTIVITY - SCHOOL BUILDINGS

- Internet-connected computers in classrooms have increased from 62,118 in 1998 to 132,115 in 2000. This is an increase of 113%.
- The number of students per Internet connected computer has decreased dramatically between the 1998 and the 2000 census of technology. In 2000 there were 6.6 students per Internet connected computer - a reduction of 51% since 1998. There were 13.5 students per Internet connected computer in 1998, and 8.6 in 1999.
- The percentage of schools with a direct connection to the Internet has increased from 68% in 1998 to 89% in 2000.
- Ninety-seven percent of schools have access to the Internet in 2000, up from 91% in 1998. Of these schools, 22% have one or more dial-up links to the Internet.

Overview Of The Census Of Technology

To help create 21st century classrooms that are suitably equipped to meet the needs of students and teachers, reliable information is needed about the current levels of education technology and its use. The Missouri Department of Elementary and Secondary Education (DESE), (Division of School Services) is helping to lead that effort by supporting the 2000 Missouri School District Census of Technology and related projects.

The census was conducted from March-July of 2000, by the University of Missouri, Office of Social and Economic Data Analysis (OSEDA), in cooperation with DESE and the Missouri Research and Education Network (MOREnet). The 2000 census has two parts: a district census and a building census.

The actual census was administered on the World Wide Web, with each district and school having a unique user ID and password to complete the census forms. Now that almost all schools have access to the Internet, this form of data collection is possible. The use of database management systems to record census information and follow up with individual districts/schools contributed greatly to the high response rate and reliability of the 2000 census.

The District Census assesses the levels of planning and training for the district as a whole and concentrates on hardware, software and levels of connectivity for the administrative buildings and offices. Completed by district-level technology specialists, the 2000 District Census includes information for all Missouri school districts (524).

The Building Census assesses planning and training needs for individual school buildings and focuses on hardware and levels of Internet connectivity in computer labs, libraries and classrooms. Completed by building-level technology contacts, the 2000 Building Census includes information for a public school universe of 2,229 schools with complete data for over 90 percent of them.

Use of a Census Methodology

The 2000 Missouri Census of Elementary and Secondary Education Computing gathered essential baseline information about instructional computing and the Internet among Missouri public schools. A "census" methodology was used to gather information from all Missouri School Districts and schools. Often survey projects draw inferences about a population by measuring the characteristics of a relatively small, usually random, sample of the larger population. However, Missouri School districts have very diverse characteristics and also have widely different levels of technology. To establish definitive baseline information, every district and every school was enumerated and data sought from all of them.

Response Rates:

The response rates were high for the 2000 Census: 99.8% for the district forms, and 99.7% for building forms. If 2000 data were not available then 1999 and/or 1998 estimates were used at the district and building level. Thus, for the purposes of the study, 1998, 1999 and 2000 data were combined to create an "**Adjusted 2000"** response-effectively counting every district and building in the state. See appendix Cfor details.

Design, Distribution and Follow-up:

In early 1999, Department of Elementary and Secondary Education Staff, MOREnet staff, and OSEDA staff collaborated in the design of the census questionnaires. Following revisions, final formats were approved. The 2000 census forms were identical to those

from 1999. The actual census was administered on the World Wide Web, with each district and school having a unique user ID and password to complete the census forms. In February 2000, Missouri School Districts were informed of the forthcoming technology census with a letter from the Assistant Commissioner of School Services, Dr. Marilou Joyner. The upcoming census was also addressed by Commissioner Bartman in a newsletter to districts. In March 2000, email contact information was solicited from district technology personnel and these email addresses were used to send emails with directions to the World Wide Site for the census questionnaires. These emails included all necessary directions, user IDs and passwords for filling out the census. Between March and July, an extensive follow-up was conducted by OSEDA staff and Department of Elementary and Secondary Education staff. These follow-up activities included over 3,000 phone calls to district/school personnel. On July 10th, the census database was closed for processing.

2000 Census of Computing Distribution and Follow-up Activities:

- March, 2000 - district technology contacts were asked for an email address to send them necessary information.
- During the second week in April a second emailing was sent to all the building points of contact which had not responded.
- During the second week in April follow up telephone calls were made by OSEDA personnel to districts and buildings that had not responded. Non-responding building and district contacts were continuously contacted through July 10.
- On July 10, 2000, the Census of Technology database was closed for analysis.
- By September 1, preliminary data were made available to DESE for reporting purposes. Summaries for individual districts were posted to the WWW in the first week of September. Final summaries and these WWW pages were completed by September 20, 2000. For the 2000 census, building-level reports were made available on the WWW to augment the district-level reports provided in previous years.

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008

The 2000 Missouri School District Computing Census

Appendix A: Results of the 2000 District-level Census of Technology

Back to 2000 Census

PLANNING:

1. Does your DISTRICT have a technology plan?

99% Yes **1%** No

If Yes,

A. Does your **district** technology plan cover the following? (Check all that apply)

99% Hardware/Peripherals	95% School Computer Software	93% Internal Connections
83% Review Requirement	99% Staff Training	91% Curriculum Integration
90% Maintenance of Equipment	67% External Conditions	57% Capacity of the school's electrical wiring

B. Is your DISTRICT technology plan for:

1% 1 year **55%** 2-4 years **44%** 5 or more years

Year plan last revised: The modal response was **"2000" (45%)**

2. Who is involved in the **district** decision-making related to technology acquisition and use? (Check all that apply)

87% Technology Team	78% School Board Members
62% Instructional Technology Director	85% Library Media Specialist

15% Director: Management Information Systems	22% Chief financial officer
30% Consultants	22% Other
93% Superintendent	74% Parents
36% Curriculum Director	93% Teachers
90% Principals	23% Business partners

3. Is technology a component in your Comprehensive School Improvement Plan?

96% Yes **4%** No

4. Does your **district** "partner" with a business or higher education institution to support technology?

29% Yes **71%** No

TRAINING:

5. Who is responsible for technical maintenance and/or support of hardware in your **district**? (Check all that apply)

77% District staff **20%** School classified staff **72%** Outside vendors
4% Parents/community members **24%** Contractor's agreement
3% Regional centers/units **17%** Students **0%** No one
56% School certified staff

6. If your district were to receive technical assistance for educational technology, what would your training priorities for the person(s) in #5 be? (1-high 2=medium 3=low). Please circle best response. (May not add to 100% due to rounding)

(44%)=1 (42%)=2 (14%)=3 Technology planning	(20%)=1 (56%)=2 (24%)=3 Community awareness/PR
(20%)=1 (51%)=2 (29%)=3 Budget planning	(77%)=1 (19%)=2 (4%)=3 Curriculum integration
(24%)=1 (49%)=2 (27%)=3 Procurement	(35%)=1 (55%)=2 (9%)=3 Information systems

(43%)=1 (38%)=2 (19%)=3 Network/wiring	(78%)=1 (19%)=2 (3%)=3 Instructional integration
(31%)=1 (41%)=2 (28%)=3 Basic operations	

7. Are your teachers required to demonstrate technology skills for new or continued employment with your district?

8% Yes **92%** No.

If yes, how are they evaluated (check all that apply): **3%** Transcripts

4% Hands-on evaluation **5%** Professional development hours **4%** Other

8. Please estimate the percentage of administrators in your **administrative building/district office(s)** at each skill level in the use of technology.

23% Beginner **63%** Intermediate **18%** Advanced

HARDWARE AND SUPPORT:

9. Please estimate the total number of FTE responsible for technical maintenance and support of hardware?

District-level staff: **Mean=2.0** School-level staff: **Mean=1.6**

10. Please identify the number of computers, by type, that are currently in use in your **administrative building/administrative office(s)**.

Apple/Macs

AppleII/IIe/GS	Mac 68000	Mac 20/30	Mac 40	Mac Power PC	IMAC	Mac power book
151	129	82	145	772	265	304

IBM Compatible

386 or earlier	486	Pentium 586	Pentium MMX	Pentium II	Pentium Pro 686	PC laptops
324	1,244	2,581	2,557	5,109	323	806

11. How many of the these personal computers are running:

(PC): Windows 3.1 or earlier **825 (6% of IBMs)** Windows 95 **8,884 (68% of IBMs)** Windows 98 **2,807 (22% of IBMs)** Windows NT **526 (<1% of IBMs)** (MAC): OS 7.5x **209 (15% (14% of MACs)**

OS 7.6x **208 (15% of MACs)** OS 7.8x or later **944 (69% of MACs)**

12. Regarding your technology plan, how many computers will be purchased for the **administrative building/administrative office(s)?:** (State total followed by district mean)

PCs: This school year? **1,016 (2)** Next year? **1,053 (2)**
Future years? **2,022 (4)**
MACs: This school year? **108 (.2)** Next year? **95 (.18)**
Future years? **156 (.3)**

13. Please estimate how many of the following your district plans to purchase **FOR YOUR SCHOOL BUILDINGS** in the next 2 years. (State total followed by district mean)

1,330 (3) Interactive whiteboards **1,177 (2)** Interactive whiteboard projectors
46,683 (94) Computers **12,780 (25)** Computer upgrades

INTERNET CONNECTIVITY - DISTANCE LEARNING:

14. Do the **administrative building/administrative office(s)** have a direct link to the Internet (dedicated connection - NOT dial-up?) (totals may not add to 100% due to rounding)

92% Yes **8%** No

If yes, what is the bandwidth capacity? (check all that apply) **88%** T1

12% 56 kbps **1%** Cable modem **4%** Other

15. Do the **administrative building/administrative office(s)** have a local area network (LAN)?

86% Yes **14%** No

If yes:

A. How many total computers are connected to the LAN? **21,224 Computers**

B. How many of the above computers are servers? **829 (4%)**

C. What operating system does your server(s) use? (check all that apply and indicate how many)

126 Windows NT how many **563** **296** NOVELLE how many **2,949**
35 Apple Share how many **256** **60** Other (please specify) **See appendix**

16. Are your administrative building/administrative office(s) and school buildings connected to each other by a Wide Area Network (WAN)?

53% Yes **47%** No

If yes, how many buildings are currently connected? **1,863**

How many buildings remain to be connected? **131**

17. Does your **administrative building/administrative office(s)** have at least one office equipped for two-way interactive video/audio communications with other locations?

7% Yes **93%** No **(n=38)**

A. If yes, check all that apply. **61%, n=23** Full motion video capability

34%, n=13 Compressed video capability

B. If yes, How many of the following video links are there in your district buildings?

One-way video w/two-way audio or PC link **n=39**

Two-way video and audio **n=55**

18. Does your **district** require parents' signatures before students can access the Internet? (indicate yes with a check mark)

72% Elementary **81%** MS/Jr. High **74%** High school

TECHNOLOGY FUNDING:

19. Amount for which items were purchased or budgeted: (State total followed by district mean in parentheses)

ITEMS PURCHASED OR BUDGETED	Last FY	Current FY	Next FY
Computer & peripheral hardware (modems, printers, CD-ROM)	$40,832,838 ($79,441)	$52,608,300 ($101,560)	$39,103,432 ($76,225)
Instructional software for classroom use	$5,288,190 ($10,308)	$7,864,358 ($15,211)	$5,525,287 ($10,791)
Professional development for educational technology	$3,763,005 ($7,349)	$4,289,194 ($8,344)	$4,295,815 ($8,439)
Internet charges	$1,653,966 ($3,198)	$1,573,209 ($3,048)	$1,505,177 ($2,922)

Distance learning (cable TV, satellite, etc.)	$2,170,736 ($4,350)	$2,130,113 ($4,294)	$2,314,206 ($4,555)
Service and/or support	$6,951,896 ($13,446)	$8,040,380 ($15,521)	$8,013,192 ($15,589)

20. Did your **district** apply for the E-rate discount for the 12-month period of July 1, 1999 through June 30, 2000?

66% Yes **34%** No

If yes, what is the estimated value of your discount? State= **$15,484,020** District mean= **$45,810**

21. Has your **district** purchased technology products or services off of the Missouri Prime Vendor Contract?

8% Yes **92%** No

If yes, in what percentage of your core content areas? 35%, n=37 (mean of the 37 respondents answering this question)

TECHNOLOGY USAGE:

22. Has your **district** incorporated technology into your curriculum guides and academic standards?

81% Yes **19%** No

If yes, in what percent of your core content areas?

59% (mean of the 382 respondents answering this question)

23. Does your **district** have any technology proficiency requirements for students to pass to the next level?

18% Yes **82%** No

24. What **district** information can be accessed from an outside location via the Internet? (check all that apply

57% District calendar **47%** School board members
11% School board agenda & minutes **55%** District staff
22% District newsletter **14%** District curriculum **28%** Student work
40% Annual report of school district data
28% Other (please specify) **See appendix**

25. Please estimate the total staff FTE responsible for the training and support of teachers in integrating the use of technology into curriculum and instruction.

District-level staff: Mean= **2** School-level staff: Mean= **6**

26. Please indicate the total number of email accounts provided by the district for each user group (state sum followed by district mean in parentheses.).

User group	# of email accounts: state (district means)
Students	51,789 (101) students
Teachers	55,218 (106) teachers
Administrators	7,533 (14) administrators

27. Please estimate the percent of the **district's** 6th graders who are computer literate (able to perform basic computer operations)?

78.1%

28. Does the **district** have its own mail server or plan to install one?

67% Yes **33%** No (District mean percentages)

If yes, what email software do (or will) you use? **See appendix**

29. Does the **district** have its own web server or plan to install one?

59% Yes **41%** No (District mean percentages)

If yes, what web software do (or will) you use? **See appendix**

30. Does the **district** have its own proxy server or plan to install one?

36% Yes **64%** No (District mean percentages)

If yes, what proxy software do (or will) you use? **See appendix**

31. Does the **district** have its own firewall or plan to install one?

48% Yes **52%** No (District mean percentages)

If yes, what firewall software do (or will) you use? **See appendix**

YEAR 2000 COMPLIANCE:

32. Does your district have a written plan for achieving year 2000 compliance?

33% Yes **67%** No

If yes, what is the projected cost?

State total= $3,470,380 District average= $6,885

If yes, who is involved (check all that apply)?

District **40%** Consultant **15%** Vendor **19%** Other **4%**

33. Please indicate the status of the following phases of Y2K planning in your **district**. (District mean percentages - may not add to 100% due to rounding)

Y2K Phase	COMPLETE	IN-PROCESS	DON'T KNOW
Awareness (Y2K information gathering and dissemination)	84%	14%	2%
Assessment (identifying systems needing repair/replacing)	76%	21%	3%
Renovation (fixing systems)	67%	26%	6%
Validation (successful testing after renovation/replacement)	67%	23%	10%
Implementation (using renovated/replaced systems)	66%	24%	9%

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008

The 2000 Missouri School District Computing Census

Appendix B: Results of the 2000 Building-level Census of Technology

Back to 2000 Census

PLANNING:

1. Does your school have a technology plan? No (if no, then skip to #2)

86% Yes **14%** No

If yes:

A. Is the school plan part of the district plan? **97%** Yes **3%** No

B. Does your school technology plan cover the following? (check all that apply)

96% Hardware/peripherals **94%** School computer software
84% Internal connections **72%** Review requirement **96%** Staff training
89% Curriculum integration **83%** Maintenance of equipment
56% External connections **53%** Capacity of the school's electrical wiring

C. Is your school technology plan for: **4.8%** 1 year **55.2%** 2-4 years

40% 5 or more years

Year last revised: The modal response was "2000" at **40.5%**

2. Who was involved in developing, implementing and evaluating the school technology plan? (Check all that apply)

89% Technology team **91%** Principal **93%** Teachers
67% Parents **49%** Instructional technology contact
79% Library media specialist **25%** Curriculum consultant
36% Business representatives **23%** Other (Please specify): **See appendix**

3. Does your school have a school improvement plan?

97% Yes **3%** No

If yes, is technology a component? **99%** Yes **1%** No

4. Does your school partner with a business or higher education institution to support technology?

31% Yes **69%** No If yes, who? **See appendix**

TRAINING:

5. Who is responsible for technical training and/or support of staff in your school? (Check all that apply)

88% District staff **29%** School classified staff
63% School certified staff **39%** Outside vendors
15% Contractor's agreement **14%** Regional centers/units **6%** Students
3% Parents/community members **<1%** No one

6. Please estimate the number of staff FTE responsible for the technical training and support needs of your building staff.*

District-level staff: **2.6** Building-level staff: **1.0** *(school mean)

7. Please rank your educational technology training priorities for this school's faculty (1=high 2=medium 3=low): *

1=54% 2=30% 3=16% Basic computer operations	1=22% 2=45% 3=33% Hypermedia operations
1=46% 2=41% 3=14% Word processing	1=21% 2=44% 3=34% LAN applications/resources
1=16% 2=51% 3=33% Database applications	1=65% 2=29% 3= 6% Instructional delivery w/instructional technology
1=56% 2=37% 3= 6% Internet applications	1=65% 2=29% 3= 6% Curriculum development /education technology
1=40% 2=48% 3=12% Evaluating Internet information	1=62% 2=19% 3=19% Other (Please specify) See appendix

* May not sum to 100% due to rounding

8. Please rank the professional development needs of the building's technical support staff (1=high 2=medium 3=low)*

1=42% 2=43% 3=15% Technology planning	1=69% 2=27% 3= 4% Curriculum integration
1=33% 2=36% 3=31% Network/wiring	1=26% 2=43% 3=31% Procurement
1=34% 2=45% 3=21% LAN applications	1=20% 2=51% 3=29% Database management

1=24% 2=43% 3=33% Budget planning	1=34% 2=48% 3=18% Community awareness
1=22% 2=40% 3=38% Distance learning	

* May not sum to 100% due to rounding

9. How many hours per school year does your building offer or schedule professional development to upgrade technology and computer skills in the following areas? (school mean hours)

Training	Administrators	Teachers
Introduction to operations	5.1 Hours	7.5 Hours
Using software applications	10.1 Hours	15.1 Hours
Using Internet resources	5.4 Hours	9.6 Hours
Curriculum integration	4.7 Hours	9.9 Hours
Teaching applications	4.1 Hours	9.6 Hours

10. Are teachers required to demonstrate technology skills for employment/continued employment with your school?

10% Yes **90%** No

If yes, how are they evaluated? (check all that apply) **35%** Transcripts

47% Hands-on evaluation **40%** Professional development hours
34% Other (please specify): **See appendix**

11. Please estimate the percentage of principal(s), teachers, and technological support staff in your school at each skill level in terms of technology use (mean response).

Faculty/staff	Beginner %	Intermediate %	Advanced %
Principals	20%	68%	16%
Teachers	31%	51%	17%

Technology support staff	2%	24%	59%

12. During the current school year, how many days has your school scheduled for professional development activities where teachers can learn/upgrade their technology and computer skills?

Mean=3.5

13. Compared with the 1998-99 school year, do you think the number of scheduled professional days for technology training will:

2% Decrease **45%** Remain the same **53%** Increase

HARDWARE:

14. Who is responsible for technical maintenance and/or support of hardware in your school? (Check all that apply)

88% District staff **28%** School classified staff
51% School certified staff **56%** Outside vendors
23% Contractor agreement **3%** Regional centers/units **9%** Students
2% Parents/community members **0%** No one

15. Please estimate the number of staff FTE responsible for the technological maintenance and support of hardware in your school.

Staff FTE: **1.6**

16. Please specify the number of computers, by type, that are currently in use in the following locations within your school:

Apple/Mac	Computer labs	Instruc-tional rooms	Library media center	Principal office(s)	Other locations
Apple II/Iie/GS	1,777	8,119	323	17	383
Mac 68000 or earlier	1,669	3,708	340	55	187
Mac 68020 or 68030	2,346	3,829	451	104	316
Mac 68040 series	2,697	5,223	532	231	425
EMATES	123	161	76	2	23

Power PC	5,529	9,091	1,480	435	530
Mac Powerbook	303	700	247	156	231
IMAC	3,354	2,493	431	157	137
Total	**17,798**	**33,324**	**3,880**	**1,157**	**2,232**

PC compatible	Computer labs	Instruc-tional rooms	Library media center	Principal office(s)	Other locations
386 or earlier	3,083	4,601	753	187	627
486	8,560	11,644	1,969	859	1,326
Pentium 586	11,064	14,657	3,220	1,848	1,847
Pentuim MMX	9,420	12,597	2,238	1,091	1,366
Pentium II	16,309	20,750	3,600	2,375	2,528
Pentium Pro (686)	2,466	2,201	539	280	359
PC laptop	619	1,504	502	459	1,025
Total	**51,521**	**67,954**	**12,821**	**7,099**	**9,078**

17. How many personal computers in your school are running:

(PC): Windows 3.1 or earlier **17,180** Windows 95 **84,439**
Windows 98 **31,284** Windows NT **4,527** (MAC): OS 7.5x **15,783**
OS 7.6x **8,695** OS 7.8x or later **11,474**

18. Please indicate the number of computers in your school that are multimedia equipped :

30,228 Macs **104,052** PCs

19. Regarding your technology plan, how many computers will be purchased for your school during: (state totals followed by school mean in parentheses)

PCs : This school year? **18,109** Next year? **24,307**
Future years? **24,853**
MACs: This school year? **3,381** Next year? **5,458**
Future years? **6,475**

20. Please indicate the number of rooms in the following locations, within your school. *

Number of.	Computer labs	Instruc-tional rooms	Library media centers	Principal office(s)	Other	Total*
ROOMS total	3,042	53,223	2,050	4,871	6,301	67,605
ROOMS wired for the Internet	2,823	43,787	1,941	4,133	5,246	56,584
ROOMS with one or more multimedia equipped computers	2,675	35,884	1,853	3,455	4,965	46,444
ROOMS with one or more multimedia equipped computers with direct connection to the Internet	2,511	32,696	1,686	3,376	4,134	46,661
ROOMS with one or more multimedia equipped computers with direct connection to the Internet **AND** with a dedicated	1,226	7,534	658	423	501	9,945

printer and a dedicated projection device						

* These totals supplied by the schools.

21. Please indicate the number of computers in the following locations, within your school.*

Number of.	Computer labs	Classrooms	Library media centers	Principal office(s)	Other	Total
Computers connected to the Internet	52,594	67,259	12,181	6,242	6,945	145,221 *
COMPUTERS multimedia equipped	45,440	63,417	11,271	5,510	5,852	131,490 *

* These totals calculated by summing cols 1-5.

Note that on summary reports we use figures only for "Intstructional" computers which includes only the first 3 columns.

22. Please report the number of peripherals in your school. (state totals followed by per-school mean in parentheses)

A. CD-ROM networked	21,651	L. Total color printers	28,621
B. Laserdisc players/DVD	5,026	M. Graphing calculators	20,334
C. VCR units	32,608	N. Scientific calculators	21,919
D. TV monitors	38,475	O. Probeware	1,102
E. Scanners/digitizers	4,332	P. Fax machines	2,165
F. Digital cameras	3,025	Q. Alpha Smart laptop processors	4,979

G. Assistive/adaptive devices	1,190	R. Interactive televisions	577
H. Computer projection devices	5,750	S. Interactive whiteboards	462
I. Dot-matrix printers	15,031	T. satellite receivers	1,171
J. Inkjet printers	33,786	U. Cable TV	18,704
K. Laser printers			10,251

INTERNET CONNECTIVITY - DISTANCE LEARNING:

23. Does your school building have access to the Internet?

97% Yes **3%** No

If yes, Who is your Internet provider?

91% MOREnet **8%** Other (please specify):See appendix

24. Does the school have a direct link (dedicated connection) to the Internet?

89% Yes **11%** No

If yes, what is the bandwidth capacity? (N, followed by percentage of those having direct links)

1,386 (79%) T1 **166 (9%)** 56KB
13 (1%) Cable modem **190 (11%)** Other (please specify): See appendix

25. Does the school have dial-up links?

22% Yes **78%** No

If yes, how many modems, by speed, are in the school? (percentages of those having dial-up links)

1% 14.4K **9%** 28.8K **9%** 33.6K **79%** 56K

26. How many dial-up computer lines are available in the school? (state total followed by school mean in parentheses)

1,855 (.94 per school)

27. If the school uses dial up links, where are you dialing to? (check all that apply)

47% District **26%** MOREnet **17%** Commercial
20% Other (please specify): See appendix

28. Does your school currently have a local area network (LAN) ?

91% Yes **9%** No

If yes: A. How many computers are connected to the LAN in your building?

Mean=77.9 per school

B. Of the above computers, how many are servers? **Mean=1.4 per school**

C. What operating system does your server(s) use? (Check all that apply and indicate how many)

25% Windows NT how many **471**
18% Apple Share how many **344**
65% NOVELLE how many **1233**
9% Other (please specify) how many **181**: **See appendix**

29. Is your school connected to another building in your district through a wide area network (WAN)?

67% Yes **33%** No

30. Do students at your school use any of the following to participate in classes originating from remote sites? (Check all that apply)

16% Satellite **9%** Desktop technologies **25%** Cable TV
13% Interactive TV (video classroom) **2%** Compressed video
3% Other (please specify): **See appendix**

31. If you do not now have any distance learning programs, do you plan on any in the next 2 years?

22% Yes **78%** No

If yes, please indicate type: **See appendix**

32. Do you require parents' signatures before students can access the Internet?

80% Yes **20%** No

33. What proportion of students in your school have signed Internet acceptable use policies?

Mean= **67%**

34. Does your school currently use filtering software on your Internet-connected computers?

55% Yes **45%** No
If yes,

A. On what percentage of your Internet connected computers **91%**

B. If yes, what products (for instance, Cyber Patrol, Net Nanny, Surf Watch): **See** appendix

TECHNOLOGY USAGE:

35. Please estimate the number of administrators, teachers, and students in your school who routinely use the following applications.

Application	Principal(s) (%)	Teachers (%)	Students (%)
A. Educational software	39%	72%	78%
B. E-mail	85%	69%	15%
C. Web browsing (Net surfing)	78%	69%	55%
D. Ebsco host or other educational database	25%	29%	25%
E. Electronic encyclopedia	22%	45%	49%

36. Please estimate the number of administrators, teachers, and students in your school who routinely use the computer for the following functions.

Functions	Principal(s) (%)	Teachers (%)	Students (%)
A. Computer-generated presentations	29%	24%	22%
B. Writing assignments	68%	66%	61%
C. Research information collection	62%	59%	57%
D. Communicate with parents	58%	46%	6%
E. Lesson plan preparation	9%	47%	NA
F. Spreadsheet/database (student records)	66%	45%	NA
G. Keep track of student performance	54%	52%	NA

H. Communicate with DESE staff	49%	13%	NA
I. Instructional delivery and presentations	18%	26%	NA

37. Who is responsible for the leadership and support of teachers in your school in integrating technology into the curriculum?

75% Technology coordinator **63%** School administrator
12% RPDC **7%** Outside vendors **42%** Library/media specialist
21% Other (please specify): **See appendix**

38. What school information can be accessed from an outside location via the Internet? (check all that apply)

29% Schedules **11%** Homework assignments/help
3% Report cards/attendance **51%** Community information
69% Teacher/school information **20%** Other (please specify) : **See appendix**

39. What percent of Internet-connected computers in your school use a web browser at least as current as Netscape 4.0 or Microsoft Internet Explorer 4.0?

mean=80% of computers

40. Who uses the DESE web site? (**http://services.dese.mo.gov/**)

86% Principals **77%** Teachers **42%** Support staff
5% Students **12%** Other (please specify): **See** appendix

41. What information and/or applications would you like to have available via the DESE web site?

(See appendix)

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008

The 2000 Missouri School District Computing Census

Appendix C: Methodology and Filtering of Survey Responses for Inclusion in Results of the 2000 Census of Technology

Back to 2000 Census

INTRODUCTION:

In processing the survey data for the current year, each school's responses to comparable questions from last year's survey were used. Thus, for example, if a school did not report on the number of Macintosh computers in classrooms then the corresponding value entered on last year's survey was used. This was intended to reduce the respondent burden and to improve the response rate, since feedback from non-responding schools in the 1999 survey indicated that a major cause for not responding to the survey was that very little or nothing had changed and they considered it a waste of time. Of course, not all questions were asked last year, so schools that did not fill out the form will have missing data for the new questions on the 2000 survey. As users completed pages of the questionnaire this year, the results were recorded with an electronic "time-stamp." There was also a question that asked them about the status of their questionnaire -- was it complete, mostly done, just started or untouched (stored in the *completion_status* variable).

In creating reports, analysis was limited to a universe of schools for which the data were reliable (i.e. for which there were classrooms where there might be computers, etc.). One measurement of reliability was to identify responses that exist within the current master list of schools from the DESE core data database. To accomplish this, a series of filters was applied to eliminate data from the final reporting data sets. The following is a summary of the criteria used to perform these filters, together with some statistics regarding how many schools were effected by each filter.

1. School type. Certain types of schools were removed from the datasets used for analysis. The major categories of buildings excluded were **ADM** - administrative centers (58 of these); **PRE** - pre schools (21); and **HOS** - hospital centers (7). In all 94 buildings were excluded based on their type. These 94 buildings reported 2,565 total computers, 468 internet connected computers and a total enrollment of 6,125 students.
2. No computers and no instructional rooms. It was decided that a building with neither computers nor any instructional rooms should be excluded from the analysis. There were 36 such schools. We do not believe that there really are 36 buildings out there with no instructional rooms or computers -- we think that most of these cases are the result of incomplete response to the survey (as evidenced by the fact that these 36 buildings reported a total of 384 internet connected computers). These 36 buildings had a total enrollment of 9,065.
3. Large school with no PCs. The validity of having a school these days with no computers at all in instructional rooms was debated. Should we assume that a building that has not reported any computers has not really reported accurate data? It was decided that it was indeed possible for schools to still have no

computers at all, but that it was extremely unlikely in larger schools. Therefore excluded any school with an enrollment of over 300 students and which reported no computers was excluded. There were 6 such schools with a total enrollment of 2,981 students. These 6 schools reported 206 internet connected computers (indicating, of course, that the 0 total computers reported represents a failure to respond to these critical questions.)

4. No enrollment (except vocational). Three schools that reported no student enrollment were excluded. Vocational schools never report enrollment so this filter did not apply to them.

A complete list of all schools excluded for reasons 2-5, along with a summary report containing the statistics cited in the above review is contained in the report file excrpt.lst - see endnote.

Schools Not Omitted. It should be noted that some schools that were considered for exclusion from the final analysis were left retained. These were cases where there was evidence that the survey had not been carefully filled out for the current school year (1999-2000). There were 7 schools that were included in the totals where the completion_status item indicated that the surveys were not "complete". This means that data from the previous year were used for these schools. The decision to include these was based on the logic that using year old data would be better than just excluding all these schools (e.g., a more reliable estimate of values was possible). There were other cases where we felt that districts may have responded to the survey but not with as much enthusiasm and completeness as we would have liked.

The response rates for the 2000 Census of Technology can be calculated in several ways. This summary is provided to allow the reader to ascertain the appropriateness of the census information for their particular uses.

Gross 2000 Response Rate:

The census population consisted of the entire list of districts and schools contained in The Missouri Department of Elementary and Secondary Education's (DESE) Core Data file as of March 6, 2000 and records from other data sources, such as MoreNet data from previous years. On July 10, 2000, the census was frozen for the purposes of analysis. At that time, any school with census information and which was not contained in the most current DESE Core Data file were excluded from analysis. This exclusion was done in order to allow for coding and data entry anomalies. Of the remaining 524 districts and 2,229 schools, 2,222 (99+%) of buildings and 523 (99+%) of districts responded indicating that they had completed the census. These figures constitute the *Gross 2000 Response Rate* for the census.

Adjusted 2000 Response Rate:

Although the *Gross 2000 Response Rate* was quite high, there were 1 District and 7 buildings that did not complete the census. For these districts, their 1999 census information was brought forward and included as their 2000 census information. This adjustment allowed DESE to make the most reliable estimate of technology parameters possible because the best predictor of 2000 census data is the previous year's data. The resulting *Adjusted 2000 Response Rate* was 100% for districts and 100% for buildings (both calculated based on 524 districts and 2,229 buildings).

The School Universe:

Some schools, such as early childhood centers and special education buildings, are irregular in their use of technology; these schools were excluded from the universe of schools used to calculate student to computer ratios and other values. Other reasons for

exclusion were lack of enrollment data, no rooms were reported, or because the school had enrollment >600 and did not report having any computers. A total of 138 schools were excluded for various reasons (6.2% of the 2229 schools in the final dataset) . The *School Universe* used for calculating computer:student ratios consisted of all remaining elementary, junior high, middle and high schools in Missouri (93.8% of the 2229 schools in the final dataset) . The 1999 Census of Technology used the same criteria for school type, which makes comparison of the two years' surveys possible. A complete report of excluded schools may be accessed at: excrpt.html.

Missouri Department of Elementary and Secondary Education
"Making a positive difference through education and service"

Email: Education Technology
Phone: 573-751-8247 Fax: 573-522-1134
Last Revised: October 22, 2008